

Application Number 10/693,011

Amendment in Response to Office Action mailed September 14, 2005

REMARKS

This Amendment is responsive to the Office Action dated September 14, 2005.

Applicant has amended claim 10. Claims 1-10 and 21 are pending.

Election Requirement Under 35 U.S.C. § 121

The Office Action maintained the election requirement of July 14, 2005, confirming Applicant's election of Group 1 (Claims 1-10 and 21) with traverse in the response filed August, 12, 2005. Accordingly, claims 11-20 and 22 have been withdrawn from consideration.

Objection to the Specification

The Office Action objected to the specification as containing headings in boldfaced lettering. Applicant respectfully traverses this objection. It appears that this objection may be based on MPEP 608.01(a) and 37 C.F.R. 1.77, which describe the preferred arrangement of application elements. Rule 77 states that specification headings should not be in boldfaced lettering, but is not mandatory in this regard. Applicant requests withdrawal of this objection.

Allowable Subject Matter

The Office Action indicated that claims 5-8 and 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form.

Claim Rejection Under 35 U.S.C. § 112

The Office Action rejected claim 10 under 35 U.S.C. 112, second paragraph, as reciting the limitation "the aperture of the antenna" without sufficient antecedent basis. Applicant has amended claim 10 to change the definite article to an indefinite article and to correct an informality. Applicant requests withdrawal of this rejection.

Claim Rejections Under 35 U.S.C. § 103

The Office Action rejected claims 1-4 under 35 U.S.C. 103(a) as being unpatentable over Nelson et al. (US 6,418,346) (hereafter Nelson) in view of Teshome (US 6,219,255). The Office Action also rejected claim 9 under 35 U.S.C. 103(a) as being unpatentable over Nelson and

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Teshome as applied to claim 1 above, and further in view of Conley et al. (US 6,418,340) (hereafter Conley).

Applicant respectfully traverses the rejections under section 103(a). The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

For example, the applied references fail to teach or suggest a programmer that includes an internal antenna mounted on a first circuit board and a display device mounted on a second circuit board, wherein the first circuit board includes a substantially contiguous ground plane layer interrupted by a plurality of gaps, as recited in independent claim 1 and as required by dependent claims 2-4 and 9.

In support of the rejection, the Office Action relied on Nelson, which describes a programmer that includes a telemetry antenna on an antenna driver circuit board and a display screen controlled by a graphics circuit. Col. 11, line 50, to col. 12, line 18. However, the antenna driver circuit board is the only circuit board mentioned by Nelson. No "second circuit board," as required by claims 1-4 and 9, is contemplated by the Nelson reference. Nelson contains no guidance about where the graphics circuit that controls the display device should be located.

Moreover, even if the Office Action were to interpret the "graphics circuit" of Nelson to be a "second circuit board" within the meaning of claim 1, Nelson fails to teach or suggest a display device *mounted on* the graphics circuit. Nelson merely states that a display screen may be "controlled by" the graphics circuit. Col. 12, line 18. The rejections should be withdrawn because Nelson fails to disclose a display device mounted on a second circuit board as recited by claim 1.

The Office Action further recognized that Nelson fails to disclose a substantially contiguous ground plane layer interrupted by a plurality of gaps. In support of the rejection, the Office Action asserted that it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Nelson to include these features. Applicant disagrees with this conclusion.

The Office Action identified no teaching in the prior art of a motivation to modify Nelson to conform to the requirements of Applicant's claims. Specifically, the Office Action identified

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no teaching within the prior art that would have suggested modification of the antenna circuit driver board of Nelson to include a substantially contiguous ground plane layer interrupted by a plurality of gaps. Moreover, the Examiner did not cite any suggestion or motivation in the prior art to make such a combination.

Nelson provides no teaching that would have suggested mounting an internal antenna on a circuit board that includes a substantially contiguous ground plane layer interrupted by a plurality of gaps. In fact, Nelson does not even teach or suggest any particular techniques for designing or incorporating a ground plane layer into a programmer for an implantable medical device. Nelson simply describes coupling a telemetry antenna to an antenna driver circuit board without ever mentioning a ground plane layer or gaps that interrupt such a layer.

The Teshome reference does nothing to cure the deficient teachings of Nelson. The Teshome reference describes a technique for reducing electromagnetic interference (EMI) in a computer system. Col. 3, line 64, to col. 4, line 10. Teshome contains no teaching or suggestion of a substantially contiguous ground plane layer. On the contrary, Teshome discloses first and second conductive segments 40, 42 that are not in contact with one another.

The conductive segments 40, 42 described by Teshome are separated by primary and secondary gaps 48, 54, and do not form a substantially contiguous ground plane layer. Teshome indicates that the gaps 48, 54 may be formed by air or insulative material. Notably, the interconnect 52 described by Teshome does not connect the conductive segments 40, 42 to one another to ensure that the entire layer is grounded, as suggested by the Examiner. Rather, the interconnect 52 resides above or below conductive segments 40, 42 and carries a signal from a driver to a receiver.

Hence, Teshome provides no teaching or suggestion of mounting an internal antenna on a circuit board that includes a substantially contiguous ground plane layer interrupted by a plurality of gaps, much less within a programmer for an implantable medical device. Thus, it would not have been obvious to a person having ordinary skill in the art to combine the segmented ground plane of Teshome with the antenna driver circuit board of Nelson.

In summary, the conclusion of obviousness for Applicant's claims 1-4 and 9, and particularly the cited motivation to modify Nelson in view of Teshome, is unsupported by any

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substantial evidence in the record. Conley provides no teaching sufficient to overcome the basic deficiencies in the Nelson and Teshome references relative to the claimed invention.

Claims 2-4 are dependent on claim 1. As described above, Nelson and Teshome fail to disclose or suggest each and every limitation of Applicant's independent claim 1. In view of the fundamental shortcomings identified above, Applicant reserves comment concerning the additional limitations expressed in the dependent claims and does not acquiesce in the Examiner's application of the teachings of Nelson and Teshome to those claims.

For at least these reasons, the Examiner has failed to establish a prima facie case for non-patentability of Applicant's claims 1-4 and 9 under 35 U.S.C. 103(a). Withdrawal of this rejection is requested.

Provisional Rejection for Obviousness-type Double Patenting:

The Examiner provisionally rejected claims 1-4 and 10 under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of copending application no. 10/693,015 in view of Teshome (US 6,219,255). Applicant respectfully traverses this rejection, particularly in light of the deficiencies identified in Teshome above. Applicant notes, however, the provisional status of this rejection. Accordingly, Applicants will address this issue if and when the rejection is formally applied.

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CONCLUSION

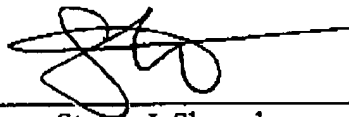
All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

Date:

By:

12-12-05

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